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FORM HD 1449 (Based on Form PTO-1449)

PATENT AND TRADEMARK OFFICE
INFORMATION DISCLOSURE CITATION
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Sheet 1 of 11

ATTORNEY DOCKET No.	SERIAL NO.	
5074A-000064	10/644,680	
APPLICANT		
Kevin J. Frank et al.		
FILING DATE	GROUP	
August 20, 2003	3736	

U.S. PATENT DOCUMENTS  Ref. Examiner's Document Date			Name	Class/	(If appropriate)	
Desig.	Initials	Number	Date .	· ·	Subclass	Filing Date
1.	/JSS/	3,109,588	11/1963	Polhemus et al.		
2.	1	3,614,950	10/1971	Rabey		
3.		3,644,825	02/1972	Davis, Jr. et al.		
4.		3,821,469	06/1974	Whetstone et al.		
5.		3,983,474	09/1976	Kuipers		
6.		4,017,858	04/1977	Kuipers		
7.		4,182,312	01/1980	Mushabac		
8.		4,228,799	10/1980	Anichkov et al.		
. 9.		4,256,112	03/1981	Kopf et al.		
10.		4,298,874	11/1981	Kuipers		
11.		4,319,136	03/1982	Jinkins		
12.		4,328,548	05/1982	Crow et al.		
13.		4,341,220	07/1982	Perry		
14.		4,346,384	08/1982	Raab		
15.		4,396,945	08/1983	DiMatteo et al.		
16.		4,419,012	12/1983	Stephenson et al.		
17.		4,506,676	03/1985	Duska		
18.		4,571,834	02/1986	Fraser et al.		
19.		4,583,538	04/1986	Onik et al.		
20.		4,608,977	09/1986	Brown	,	
21.		4,617,925	10/1986	Laitinen		
22.		4,638,798	01/1987	Shelden et al.		
23.		4,659,971	04/1987	Suzuki et al.	•	
24.		4,660,970	04/1987	Ferrano Ferrano		
25.		4,688,037	08/1987	Krieg		
26.	V	4,701,049	10/1987	Beckmann et al.		

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Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
27.	/JSS/	4,705,395	11/1987	Hageniers		
28.	1	4,705,401	11/1987	Addleman et al.		
29.		4,709,156	11/1987	Murphy et al.		
30.		4,710,708	12/1987	Rorden et al.		
31.		4,723,544	02/1988	Moore et al.		
32.		4,733,969	03/1988	Case et al.		
33.		Re. 32,619	03/1988	Damadian		
34.		4,737,032	04/1988	Addleman et al.		
35.		4,742,356	05/1988	Kuipers		
36.		4,742,815	05/1988	Ninan et al.		
37.		4,743,770	05/1988	Lee		
38.		4,743,771	05/1988	Sacks et al.		
39.		4,745,290	05/1988	Frankel et al.		
40.		4,753,528	06/1988	Hines et al.		1
41.		4,761,072	08/1988	Pryor		
42.		4,764,016	08/1988	Johansson		
43.		4,779,212	10/1988	Levy		
44.		4,782,239	11/1988	Hirose et al.		
45.		4,788,481	11/1988	Niwa		
46.		4,794,262	12/1988	Sato et al.		
47.		4,804,261	02/1989	Kirschen		
48.		4,805,615	02/1989	Carol		
49.		4,809,694	03/1989	Ferrara		
50.		4,821,200	04/1989	Öberg		
51.		4,822,163	04/1989	Schmidt		
52.		4,829,373	05/1989	Leberl et al.		
53.	V	4,838,265	06/1989	Cosman et al.		

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#### PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)

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54.	/JSS/	4,841,967	06/1989	Chang et al.		
55.	ı	4,825,091	08/1989	Breyer et al.		
56.		4,860,331	08/1989	Williams et al.		
57.		4,869,247	09/1989	Howard, III et al.		
58.		4,875,165	10/1989	Fencil et al.		
59.		4,875,478	10/1989	Chen	-	
60.		4,884,566	12/1989	Mountz et al.		
61.		4,896,673	01/1990	Rose et al.		
62.		4,955,891	09/1990	Carol		
-63.		4,961,422	10/1990	Marchosky et al.		
64.		5,017,139	05/1991	Mushabac		
65.		5,047,036	09/1991	Koutrouvelis		
66.		5,078,140	01/1992	Kwoh		
67.		5,098,426	03/1992	Sklar et al.		
68.		5,099,846	03/1992	Hardy		
69.		5,143,076	09/1992	Hardy et al.		
70.		5,193,106	03/1993	DeSena		
71.		5,207,688	05/1993	Carol		
72.		5,224,049	06/1993	Mushabac		
73.		5,230,338	07/1993	Alien et al.		
74.		5,230,623	07/1993	Guthrie et al.		
75.		5,257,998	11/1993	Ota et al.		
76.		5,261,404	11/1993	Mick et al.		
77.		5,285,787	02/1994	Machida		
78.		5,291,889	03/1994	Kenet et al.		
79.		5,299,253	03/1994	Wessels		
80.	V	5,300,080	04/1994	Clayman et al.		

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#### PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)

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81.	/JSS/	5,306,271	04/1994	Zinreich et al.		
82.		5,307,072	04/1994	Jones, Jr.		·
83.	•	5,330,485	07/1994	Clayman et al.		
84.		5,359,417	10/1994	Müller et al.		
85.		5,371,778	12/1994	Yanof et al.		
86.		5,394,875	03/1995	Lewis et al.		
87.		5,398,684	03/1995	Hardy		
88.		5,413,573	05/1995	Koivukangas		
89.		5,457,641	10/1995	Zimmer et al.		
<b>.90</b> .		5,469,847	11/1995	Zinreich et al.		
91.		5,480,439	01/1996	Bisek et al.		
92.		5,514,146	05/1996	Lam et al.		
93.		5,566,681	10/1996	Manwaring et al.		
94.		5,568,384	10/1996	Robb et al.		
95.		5,575,798	11/1996	Koutrouvelis		
96.		5,590,215	12/1996	Allen		
97.		5,611,025	03/1997	Lorensen et al.		
98.		5,646,524	07/1997	Gilboa		
99.		5,682,890	11/1997	Kormos et al.		
100.		5,696,500	12/1997	Taylor et al.		
101.		5,740,802	04/1998	Nafis et al.		
102.		5,767,669	06/1998	Hansen et al.		
103.		5,767,960	06/1998	Orman		
104.		5,769,843	06/1998	Abela et al.		
105.		5,810,008	09/1998	Dekel et al.		
106.		5,820,553	10/1998	Hughes		
107.	V	5,828,770	10/1998	Leis et al.		

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Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
108.	/JSS/	5,882,304	03/1999	Ehnholm et al.		
109.	1	5,889,834	03/1999	Vilsmeier et al.		
110.		5,947,980	09/1999	Jensen et al.		
111.		5,951,571	09/1999	Audette		
112.		5,957,844	09/1999	Dekel et al.		
113.		5,967,982	10/1999	Barnett		
114.		6,006,127	12/1999	Van Der Brug et al.		
115.		6,013,087	01/2000	Adams et al.		
116.		6,014,580	01/2000	Blume et al.		
1.17.		6,071,288	06/2000	Carol et al.		
118.		6,076,008	06/2000	Bucholz		
119.		6,096,050	08/2000	Audette		
120.		6,122,541	09/2000	Cosman et al.		
121.		6,147,480	11/2000	Osadchy et al.		
122.		6,165,181	12/2000	Heilbrun et al.		
123.		6,178,345	01/2001	Vilsmeier et al.		
124.		6,194,639	02/2001	Botella et al.		
125.		6,201,387	03/2001	Govari		
126.		6,203,497	03/2001	Dekel et al.		·
127.		6,211,666	04/2001	Acker		
128.		2001/0007918	07/2001	Vilsmeier et al.		
129.		6,259,942	07/2001	Westermann et al.		
130.		6,285,902	09/2001	Kienzle, III et al.		
131.		2002/0095081	07/2002	Vilsmeier		
132.		2004/0024309	02/2004	Ferre et al.		
133.		6,314,310	11/2001	Ben-Haim et al.		
134.	V	6,427,314	08/2002	Acker		

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Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
135.	/JSS/	6,478,802	11/2002	Kienzle, III et al.		
136.		6,484,049	11/2002	Seeley et al.		
137.		6,490,475	12/2002	Seeley et al.		
138.	V	6,516,046	02/2003	Fröhlich et al.		

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1.	/JS	SS/	EP 0 062 941	03/1982	Europe			
2.		1	EP 0 119 660	09/1984	Europe			
3.			EP 0 155 857	01/1985	Europe			
4.			EP 0 326 768	12/1988	Europe			
5.			EP 0 427 358	10/1990	Europe			
6.			EP 0 456 103	05/1991	Europe			
7.			EP 0 908 146	10/1998	Europe			
8.			EP 0 930 046	10/1998	Europe			
9.			DE 35 08730	03/1985	Germany		Abstract	
10.			DE 37 17 871	05/1987	Germany		Abstract	
11.			DE 38 38011	11/1988	Germany		Abstract	
12.			DE 42 13 426	04/1992	Germany		Abstract	
_13.			DE 42 25 112	07/1992	Germany		Abstract	
14.			DE 197 15 202	04/1997	Germany		Abstract	
15.			DE 197 47 427	10/1997	Germany		Abstract	
16.			DE 197 51 761	11/1997	Germany		Abstract	
17.			DE 198 32 296	07/1998	Germany		Abstract	
18.			GB 2 094 590	02/1982	Great Britain			
19.			GB 2 164 856	10/1984	Great Britain			
20.	V		JP 61-94639	10/1984	Japan			No

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# FORM HDP-1449 (Based on Form PTO-1449) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) Sheet 7 of 11 ATTORNEY DOCKET NO. SERIAL NO. 10/644,680 APPLICANT Kevin J. Frank et al. FILING DATE August 20, 2003 3736

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21.	/JSS	S/ JP 62-327	06/1985	Japan			Х
22.		JP 63-240851	03/1987	Japan			Х
23.		JP 3-267054	03/1990	Japan	· · · · · · · · · · · · · · · ·	Abstract	
24.		FR 2 618 211	07/1987	France		Abstract	
25.		WO 90/05494	11/1989	WIPO			
26.		WO 95/07055	09/1994	WIPO		Abstract	
27.		WO 96/32059	11/1995	WIPO			
28.		WO 97/49453	06/1997	WIPO			
29.		WO 97/36192	10/1997	WIPO		Abstract	
30.		WO 99/23956	11/1997	WIPO			
31.		WO 99/15097	09/1998	WIPO			
32.		WO 99/21498	10/1998	WIPO		Abstract	
33.		WO 99/27839	12/1998	WIPO `			
34.		WO 99/33406	12/1998	WIPO			
35.		WO 99/37208	07/1999	WIPO			
36.		WO 99/38449	01/1999	WIPO			
37.		WO 99/52094	04/1999	WIPO			
38.		WO 99/26549	06/1999	WIPO			
39.	V	WO 99/29253	06/1999	WIPO			

OTHE	ER D	OCUM	ENTS (including Author, Title, Date, Pertinent Pages, etc.)
Ref. Desig.	Exar Initia	niner's Is	
1.	/J:	SS/	Adams et al., Computer-Assisted Surgery, IEEE Computer Graphics & Applications, pp. 43-51, (May 1990)
2.			Bergstrom et al. Stereotaxic Computed Tomography, Am. J. Roentgenol, vol. 127 pp. 167-170 (1976)
3.	\	$\sqrt{}$	Brown, R., M.D., A Stereotactic Head Frame for Use with CT Body Scanners, Investigative Radiology © J.B. Lippincott Company, pp. 300-304 (July-August 1979)

Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007
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FORM HDP-1449 (Based on Form PTO-1449)	ATTORNEY DOCKET No.	SERIAL NO.	
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OTHE	R DOCUME	NTS (including Author, Title, Date Pertinent Pages, etc.)
Ref. Desig.	Examiner's Initials	
4.	/JSS/	Bucholz, R.D., et al. Image-guided surgical techniques for infections and trauma of the central nervous system, Neurosurg. Clinics of N.A., vol. 7, No. 2, pp. 187-200 (1996)
5.		Bucholz, R.D., et al., A Comparison of Sonic Digitizers Versus Light Emitting Diode-Based Localization, Interactive Image-Guided Neurosurgery, Chapter 16, pp. 179-200 (1993)
6.		Bucholz, R.D., et al., Intraoperative localization using a three dimensional optical digitizer, SPIE – The Intl. Soc. for Opt. Eng., vol. 1894, pp. 312-322 (Jan. 17-19, 1993)
7.		Bucholz, R.D., et al., Intraoperative Ultrasonic Brain Shift Monitor and Analysis, Stealth Station Marketing Brochure (2 pages) (undated)
8.		Bucholz, R.D., et al., The Correction of Stereotactic Inaccuracy Caused by Brain Shift Using an Intraoperative Ultrasound Device, First Joint Conference, Computer Vision, Virtual Reality and Robotics in Medicine and Medical Robotics and Computer-Assisted Surgery, Grenoble, France, pp. 459-466 (Mar. 19-22, 1997)
9.		Cutting M.D. et al., Optical Tracking of Bone Fragments During Craniofacial Surgery, Second Annual International Symposium on Medical Robotics and Computer Assisted Surgery, pp. 221-225, (November 1995)
10.		Friets, E.M., et al. A Frameless Stereotaxic Operating Microscope for Neurosurgery, IEEE Trans. on Biomed. Eng., vol. 36, No. 6, pp. 608-617 (July 1989)
11.		Gallen, C.C., et al., Intracranial Neurosurgery Guided by Functional Imaging, Surg. Neurol., vol. 42, pp. 523-530 (1994)
12.		Galloway, R.L., Jr. et al, Optical localization for interactive, image-guided neurosurgery, SPIE, Vol. 2164, pp. 137-145 (undated
13.		Galloway, R.L., et al., Interactive Image-Guided Neurosurgery, IEEE Trans. on Biomed. Eng., vol. 89, No. 12, pp. 1226-1231 (1992)
14.		Gomez, C.R., et al., Transcranial Doppler Ultrasound Following Closed Head Injury: Vasospasm or Vasoparalysis?, Surg. Neurol., vol. 35, pp. 30-35 (1991)
15.		Grimson, W.E.L., An Automatic Registration Method for Frameless Stereotaxy, Image Guided Surgery, and enhanced Reality Visualization, IEEE, pp. 430-436 (1994)
16.		Grimson, W.E.L., et al., Virtual-reality technology is giving surgeons the equivalent of x-ray vision helping them to remove tumors more effectively, to minimize surgical wounds and to avoid damaging critical tissues, Sci. Amer., vol. 280, No. 6, pp. 62-69 (Jun. 1999)
17.	V	Guthrie, B.L., Graphic-Interactive Cranial Surgery: The Operating Arm System, Handbook of Stereotaxy Using the CRW Apparatus, Chapter 13, pp. 193-211 (undated

Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007
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# FORM HDP-1449 (Based on Form PTO-1449) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) Sheet 9 of 11 ATTORNEY DOCKET NO. SERIAL NO. 10/644,680 APPLICANT Kevin J. Frank et al. FILING DATE August 20, 2003 3736

OTHE	R DOCUME	NTS (including Author, Title, Date, Pertinent Pages, etc.)
Ref. Desig.	Examiner's Initials	
18.	/JSS/	Hardy, T., M.D., et al., CASS: A Program for Computer Assisted Stereotaxic Surgery, The Fifth Annual Symposium on Comptuer Applications in Medical Care, Proceedings, November 1-4, 1981, IEEE, pp. 1116-1126, (1981)
19.		Heilbrun, M.D., Progressive Technology Applications, Neurosurgery for the Third Millenium, Chapter 15, J. Whitaker & Sons, Ltd., Amer. Assoc. of Neurol. Surgeons, pages 191-198 (1992)
20.		Heilbrun, M.P., Computed Tomography – Guided Stereotactic Systems, Clinical Neurosurgery, Chapter 31, pp. 564-581 (1983)
21.		Heilbrun, M.P., et al., Stereotactic Localization and Guidance Using a Machine Vision Technique, Sterotact & Funct. Neurosurg., Proceed. of the Mtg. of the Amer. Soc. for Sterot. and Funct. Neurosurg. (Pittsburgh, PA) vol. 58, pp. 94-98 (1992)
, <b>22.</b>		Kall, B., The Impact of Computer and Imgaging Technology on Stereotactic Surgery, Proceedings of the Meeting of the American Society for Stereotactic and Functional Neurosurgery, pp. 10-22 (1987)
23.		Kato, A., et al., A frameless, armless navigational system for computer-assisted neurosurgery, J. Neurosurg., vol. 74, pp. 845-849 (May 1991)
24.		Kelly, P.J., Computer Assisted Stereotactic Biopsy and Volumetric Resection of Pediatric Brain Tumors, Brain Tumors in Children, Neurologic Clinics, Vol. 9, No. 2, pp. 317-336 (May 1991)
25.		Kelly, P.J., et al., Results of Computed Tomography-based Computer-assisted Stereotactic Resection of Metastatic Intracranial Tumors, Neurosurgery, Vol. 22, No. 1, Part 1, 1988, pp. 7-17 (January 1988)
26.		Kelly, P.J., Computer-Directed Stereotactic Resection of Brain Tumors, Neurologica Operative Atlas, Vol. 1, No. 4, pp. 299-313 (1991)
27.		Kelly, P.J., Stereotactic Imaging, Surgical Planning and Computer-Assisted Resection of Intracranial Lesions: Methods and Results, Advances and Technical Standards in Neurosurgery, Vol. 17, pp. 78-118, (1990)
28.		Kim, W.S. et al., A Helmet Mounted Display for Telerobotics, IEEE, pp. 543-547 (1988)
29.		Klimek, L., et al., Long-Term Experience with Different Types of Localization Systems in Skull-Base Surgery, Ear, Nose & Throat Surgery, Chapter 51, pp. 635-638 (undated)
30.		Kosugi, Y., et al., An Articulated Neurosurgical Navigation System Using MRI and CT Images, IEEE Trans. on Biomed, Eng. vol. 35, No. 2, pp.147-152 (Feb. 1988)
31.	V	Krybus, W., et al., Navigation Support for Surgery by Means of Optical Position Detection, Computer Assisted Radiology Proceed. of the Intl. Symp. CAR '91 Computed Assisted Radiology, pp. 362-366 (Jul. 3-6, 1991)

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Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007	

# FORM HDP-1449 (Based on Form PTO-1449) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) Sheet 10 of 11 ATTORNEY DOCKET NO. SERIAL NO. 10/644,680 APPLICANT Kevin J. Frank et al. FILING DATE August 20, 2003 3736

OTHE	R DOCUM	ENTS (including Author, Title, Date, Pertinent Pages, etc.)				
Ref. Desig.	Examiner's Initials					
32.	/JSS/	Kwoh, Y.S., Ph.D., et al., A New Computerized Tomographic-Aided Robotic Stereotaxis System, Robotics Age, Vol.7, No. 6, pp. 17-22 (June 1985)				
33.		Lavallee, S., et al., Computer Assisted Knee Anterior Cruciate Ligament Reconstruction First Clinical Tests, Proceedings of the First International Symposium on Medical Robotics and Computer Assisted Surgery, pp. 11-16 (September 1994)				
34.		Lavallee, S., et al., Computer Assisted Medical Interventions, NATO ASI Series, vol. F 60, 3d Imaging in Medic., pp. 301-312 (1990)				
35.		Leavitt, D.D., et al., Dynamic Field Shaping to Optimize Stereotactic Radiosurgery, I.J. Rad. Onc. Biol. Physc., vol. 21, pp. 1247-1255 (1991)				
36.		Maurer, Jr., et al., Registration of Head CT Images to Physical Space Using a Weighted Combination of Points and Surfaces, IEEE Trans. on Med. Imaging, Vol. 17, No. 5, pp. 753-761 (October 1998)				
<b>37</b> .		McGirr, S., M.D., et al., Stereotactic Resection of Juvenile Pilocytic Astrocytomas of the Thalamus and Basal Ganglia, Neurosurgery, Vol. 20, No. 3, pp. 447-452, (1987)				
38.		Ng, W.S. et al., Robotic Surgery - A First-Hand Experience in Transurethral Resection of the Prostate Surgery, IEEE Eng. in Med. and Biology, pp. 120-125 (March 1993)				
39.		Penn, R.D., et al., Stereotactic Surgery with Image Processing of Computerized Tomographic Scans, Neurosurgery, vol. 3, No. 2, pp. 157-163 (SepOct. 1978)				
40.		Pixsys, 3-D Digitizing Accessories, by Pixsys (marketing brochure)(undated) (2 pages)				
41.		Reinhardt, H., et al., A Computer-Assisted Device for Intraoperative CT-Correlated Localization of Brain Tumors, pp. 51-58 (1988)				
42.		Reinhardt, H.F. et al., Sonic Stereometry in Microsurgical Procedures for Deep-Seated Brain Tumors and Vascular Malformations, Neurosurgery, vol. 32, No. 1, pages 51-57 (Jan. 1993)				
43.		Reinhardt, H.F., et al., Mikrochirugische Entfernung tiefliegender Gefäβmiβbildungen mit Hilfe der Sonar-Stereometrie (Microsurgical Removal of Deep-Seated Vascular Malformations Using Sonar Stereometry). Ultraschall in Med. 12, pp. 80-83 (1991)				
44.		Reinhardt, Hans. F., Neuronavigation: A Ten-Year Review, Neurosurgery, pp.329-341 (undated)				
45.		Simon, D.A., Accuracy Validation in Image-Guided Orthopaedic Surgery, Second Annual Intl. Symp. on Med. Rob. an Comp-Assisted surgery, MRCAS '95, pp. 185-192 (undated)				
46.	V	Smith, K.R., et al. Multimodality Image Analysis and Display Methods for Improved Tumor Localization in Stereotactic Neurosurgery, Annul Intl. Conf. of the IEEE Eng. in Med. and Biol. Soc., vol. 13, No. 1, p. 210 (1991)				

Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007
	7001110, 011111111		•

# FORM HDP-1449 (Based on Form PTO-1449) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) Sheet 11 of 11 ATTORNEY DOCKET NO. SERIAL NO. 10/644,680 APPLICANT Kevin J. Frank et al. FILING DATE August 20, 2003 3736

OTHE	R DOCL	IMENTS (including Author, Title, Date, Pertinent Rages, etc.)
Ref. Desig.	Examiner's	
47. /JSS/		Tan, K., Ph.D., et al., A frameless stereotactic approach to neurosurgical planning based on retrospective patient-image registration, J Neurosurgy, Vol. 79, pp. 296-303 (August 1993)
48.		Thompson, et al., A System for Anatomical and Functional Mapping of the Human Thalamus, Computers and Biomedical Research, Vol. 10, pp. 9-24 (1977)
49.		Trobraugh, J.W., et al., Frameless Stereotactic Ultrasonography: Method and Applications, Computerized Medical Imaging and Graphics, Vol. 18, No. 4, pp. 235-246 (1994)
50.		Von Hanwhr et al., Foreword, Computerized Medical Imaging and Graphics, Vol. 18, No. 4, pp. 225-228, (July-August 1994)
51.		Wang, M.Y., et al., An Automatic Technique for Finding and Localizing Externally Attached Markers in CT and MR Volume Images of the Head, IEEE Trans. on Biomed. Eng., Vol. 43, No. 6, pp. 627-637 (June 1996)
<b>'52</b> .	V	Watanabe, E., M.D., et al., Open Surgery Assisted by the Neuronavigator, a Stereotactic, Articulated, Sensitive Arm, Neurosurgery, Vol. 28, No. 6, pp. 792-800 (1991)

Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007	



FORMEHID BENEZO (Based on Form PTO-1449)

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U.S. P	ATENT DO	CUMENTS			•	
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.	/JSS/	Re. 35,025	8/1995	Anderton		
2.		Re. 35,816	6/1998	Schulz		
3.		1,576,781	03/1926	Phillips .		
4.		1,735,726	11/1929	Bornhardt		
5.		2,407,845	09/1946	Nemeyer		
6.		2,650,588	09/1953	Drew		
7.		2,697,433	12/1954	Sehnder		
8.		3,016,899	01/1962	Stenvall		·
9.		3,017,887	01/1962	Heyer		
10.		3,061,936	11/1962	Dobbeleer .		1
11.		3,073,310	01/1963	Mocarski		
12.		3,294,083	12/1966	Alderson		
13.		3,367,326	02/1968	Frazier		,
14.		3,439,256	04/15/1969	Kähne et al.		
15.		3,577,160	05/1971	White		·
16.		3,674,014	07/04/1972	Tillander		
17.		3,702,935	11/1972	Carey et al.		
18.		3,704,707	12/1972	Halloran		
19.		3,868,565	02/25/1975	Kuipers		
20.		3,941,127	03/1976	Froning		
21.	V	4,037,592	07/1977	Kronner		

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U.S. F	ATENT DO	CUMENTS		• .	<del></del>	
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
22.	/JSS/	4,052,620	10/1977	Brunnett		
23.		4,054,881	10/18/1977	Raab		
24.		4,117,337	09/26/1978	Staats		·
25.		4,173,228	11/06/1979	Van Steenwyk et al.		
26.		4,202,349	05/1980	Jones		
27.		4,262,306	04/14/1981	Renner		· .
28.		4,287,809	6 09/08/1981	Egli et al.		
29.		4,314,251	02/02/1982	Raab		
∙30.		4,317,078	02/23/1982	Weed et al.		
31.		4,328,813	05/1982	Ray		
32.		4,339,953	07/20/1982	lwasaki		
33.		4,358,856	11/09/1982	Stivender et al.		
34.		4,368,536	01/1983	Pfeiler .		
35.		4,396,885	08/02/1983	Constant		
36.		4,403,321	09/1983	DiMarco		
37.		4,418,422	11/1983	Richter et al.		
38.		4,422,041	12/20/1983	Lienau ·		
39.		4,431,005	02/14/1984	McCormick		
40.		4,485,815	12/1984	Amplatz		
41.	V	4,543,959	10/01/1985	Sepponen		

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Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
42.	/JSS/	4,548,208	10/22/1985	Niemi		
43.	1	4,572,198	02/25/1986	Codrington		
44.		4,584,577	04/22/1986	Temple		
45.		4,613,866	09/23/1986	Blood		1
46.	·	4,618,978	10/21/1986	Cosman		
47.		4,621,628	11/1986	Bludermann		•
48.		4,625,718	12/1986	Olerud et al.		·
49.		4,642,786	02/10/1987	Hansen		
50.		4,645,343	02/1987	Stockdale et al.		
51.		4,649,504	03/10/1987	Krouglicof et al.		
52.		4,651,732	03/24/1987	Frederick		
53.		4,653,509	03/1987	Oloff et al.		
54.		4,673,352	06/1987	Hansen		
55.		4,706,665	11/17/1987	Gouda		
56.		4,719,419	01/12/1988	Dawley		
. 57.		4,722,056	01/26/1988	Roberts et al.		(1)
58.		4,722,336	02/1988	Kim et al.		
59.		4,727,565	02/23/1988	Ericson		
60.		4,737,794	04/12/1988	Jones	. ,	·
61.	V	4,737,921	04/12/1988	Goldwasser et al.		-

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U.S. P	ATENT DO	CUMENTS			<del></del>	
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
62.	/JSS/	4,750,487	06/1988	Zanetti		
63.		4,771,787	09/20/1988	Wurster et al.		
64.		4,791,934	12/20/1988	Brunnett		
65.		4,793,355	12/1988	Crum et al.		
66.		4,797,907	01/1989	Anderton		
67.		4,803,976	02/1989	Frigg et al.		
. 68.		4,821,206	04/11/1989	Arora		•
69.		4,821,731	04/18/1989	Martinelli et al.		
70.		4,836,778	06/06/1989	Baumrind et al.		
71.		4,845,771	07/1989	Wislocki et al.		
72 <sub>:</sub>		4,849,692	07/18/1989	Blood		
73.	• (	4,862,893	09/05/1989	Martinelli		·.
74.		4,889,526	12/26/1989	Rauscher et al.		
75.		4,905,698	03/06/1990	Strohl, Jr. et al.		
76.		4,923,459	05/1990	Nambu		
77.		4,931,056	06/1990	Ghajar et al.		
78.		4,945,305	07/31/1990	Blood		
79.		4,945,914	08/1990	Allen		•
80.		4,951,653	08/1990	Fry et al.		
81.	V	4,977,655	12/18/1990	Martinelli		·

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82.	, /JSS/	4,989,608	02/05/1991	Ratner		
83.	1	4,991,579	02/12/1991	Allen		
84.		5,002,058	03/26/1991	Martinelli		
85.		5,005,592	04/09/1991	Cartmell	· ·	
86.		5,013,317	05/1991	Cole et al.		,
87.		5,016,639	05/21/1991	Allen		
88.		5,027,818	07/02/1991	Bova et al.		
89.		5,030,196	07/09/1991	Inoue		
90.		5,030,222	07/1991	Calandruccio et al.		
91.		5,031,203	07/1991	Trecha		
92.		5,042,486	08/27/1991	Pfeiler et al.		
93.		5,050,608	09/24/1991	Watanabe et al.	· .	
94.		5,054,492	10/08/1991	Scribner et al.		
95.		5,057,095	10/15/1991	Fabian	· .	·
96.		5,059,789	10/22/1991	Salcudean		
97.		5,079,699	01/07/1992	Tuy et al.		
98.		5,086,401	02/04/1992	Glassman et al.		
99.		5,094,241	03/10/1992	Allen		·
100.		5,097,839	03/24/1992	Allen		
101.	V	5,099,845	03/31/1992	Besz et al.		

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Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
102.	/JS	5,105,829	04/21/1992	Fabian et al.		
103.		5,107,839	04/28/1992	Houdek et al.		
104.		5,107,843	04/1992	Aarnio, et al.		
105.		5,107,862	04/28/1992	Fabian et al		
106.		5,109,194	04/28/1992	Cantaloube		
107.		5,119,817	06/09/1992	Allen		
108.		5,142,930	09/01/1992	Allen et al.		
109.		5,152,288	10/06/1992	Hoenig et al.		
110.		5,160,337	11/1992	Cosman		
111.		5,161,536	11/10/1992	Vikomerson et al.		
112.		5,178,164	01/12/1993	Allen		
113.		5,178,621	01/1993	Cook et al.		
114.		5,186,174	02/1993	Schlondorff et al.		
115.		5,187,475	02/16/1993	Wagener et al.		
116.		5,188,126	02/23/1993	Fabian et al		
117.		5,190,059	03/02/1993	Fabian et al		
118.		5,197,476	03/30/1993	Nowacki et al.		· .
119.		5,197,965	03/1993	Cherry et al.		
120.		5,198,768	03/30/1993	Keren .		
121.	V	5,198,877	03/30/1993	Schulz		

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U.S. PATENT DOCUMENTS								
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date		
122.	/JSS/	5,211,164	05/18/1993	Allen				
123.	ı	5,211,165	05/18/1993	Dumoulin et al.	1.			
124.		5,211,176	05/1993	Ishiguro et al.				
125.		5,212,720·	05/1993	Landi et al.				
126.		5,214,615	05/25/1993	Bauer				
127.		5,219,351	06/1993	Teubner et al.				
128.		5,222,499	06/29/1993	Allen et al.				
129.	·	5,228,442	07/20/1993	Imran				
130.	·	5,233,990	08/1993	Barnea				
131.		5,237,996	08/24/1993	Waldman et al.				
132.		5,249,581	10/1993	Horbal et al.				
133.		5,251,127	10/1993	Raab				
134.		5,251,635	10/12/1993	Dumoulin et al.				
135.		5,253,647	10/19/1993	Takahashi et al.				
136.		5,255,680	10/26/1993	Darrow et al.				
137.		5,257,636	11/02/1993	White	30			
138.		5,265,610	11/30/1993	Darrow et al.				
139.		5,265,611	11/30/1993	Hoenig et al.				
<sup>.</sup> 140.		5,269,759	12/14/1993	Hernandez et al.				
141.	V	5,271,400	12/21/1993	Dumoulin et al.				

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U.S. PATENT DOCUMENTS								
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date		
142.	/JSS/	5,273,025	12/28/1993	Sakiyama et al.				
143.		5,274,551	12/28/1993	Corby, Jr.				
144.		5,279,309	01/18/1994	Taylor et al.				
145.		5,291,199	03/01/1994	Overman et ai		·		
146.		5,295,483	03/22/1994	Nowacki et al.		·		
147.		5,297,549	03/29/1994	Beatty et al.				
148.		5,299,254	03/29/1994	Dancer et al.				
149.		5,299,288	03/29/1994	Glassman et al.	•	·		
150.		5,305,091	04/1994	Gelbart et al.				
151.		5,305,203	04/1994	Raab				
152.		5,309,913	05/10/1994	Kormos et al.				
153.		5,315,630	05/24/1994	Sturm et al.				
154.		5,316,024	05/31/1994	Hirschi et al.				
155.		5,318,025	06/07/1994	Dumoulin et al.				
156.		5,320,111	06/1994	Livingston .				
157.	·	5,325,728	07/05/1994	Zimmerman et al.				
158.		5,325,873	07/05/1994	Hirschi et al.				
159.		5,329,944	07/19/1994	Fabian et al				
160.		5,333,168	07/1994	Fernandes et al.				
161.	V	5,353,795	10/11/1994	Souza et al.		:		

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U.S. F	PATENT DO	CUMENTS	·			
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
162.	/JSS/	5,353,800	10/11/1994	Pohndorf et al		
163.		5,353,807	10/11/1994	DeMarco		
164.		5,368,030	11/29/1994	Zinreich et al.		
165.		5,375,596	12/27/1994	Twiss et al.		
166.		5,377,678	01/03/1995	Dumoulin et al.		
167.		5,383,454	01/24/1995	Bucholz		
168.		5,385,146	01/31/1995	Goldreyer		
169.		5,385,148	01/31/1995	Lesh et al.		
170.		5,386,828	02/07/1995	Owens et al.		
171.		5,389,101	02/1995	Heilbrun et al.		
172.		5,391,199	02/21/1995	Ben-Haim		
173.		5,394,457	02/1995	Leibinger et al.		
174.		5,397,329	03/1995	Allen		
175.		5,399,146	03/21/1995	Nowacki et al.		
176.		5,400,384	03/1995	Fernandes et al.		
177.		5,402,801	04/04/1995	Taylor		
178.		5,408,409	04/1995	Glassman et al.	·	
179.		5,417,210	05/23/1995	Funda et al.		
180.		5,419,325	05/30/1995	Dumoulin et al.		
181.	V	5,423,334 <sup>-</sup>	06/13/1995	Jordan		

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U.S. PATENT DOCUMENTS									
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date			
182.	. /JSS/	5,425,367	06/20/1995	Shapiro et al.					
183.		5,425,382	06/20/1995	Golden et al.					
184.		5,426,683	06/1995	O'Farrell, Jr., et al.					
185.		5,426,687	06/1995	Goodall et al.					
186.		5,427,097	06/1995	Depp					
187.		5,429,132	07/04/1995	Guy et al.					
188.		5,433,198	07/18/1995	Desai					
189.		5,437,277	08/01/1995	Dumoulin et al.					
190.		5,443,066	08/22/1995	Dumoulin et al.					
191.		5,443,489	08/22/1995	Ben-Haim					
192.		5,444,756	08/1995	Pai et al.					
193.		5,445,144	08/29/1995	Wodicka et al.	·				
194.		5,445,150	08/29/1995	Dumoulin et al.					
195.		5,445,166	08/29/1995	Taylor					
196.		5,446,548	08/1995	Gerig et al.					
197.		5,447,154	09/05/1995	Cinquin et al.					
198.		5,448,610	09/1995	Yamamoto et al.	. 0				
199.	·	5,453,686	09/26/1995	Anderson	v				
200.		5,456,718	10/10/1995	Szymaitis	·				
201.	V	5,458,718	. 10/17/1995	Venkitachalam					

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U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
202.	/JSS	5,464,446	11/1995	Dreessen et al.		
203.		5,478,341	12/1995	Cook et al.		
204.		5,478,343	12/1995	Ritter		
205.		5,480,422	01/02/1996	Ben-Haim .		
206.	:	5,483,961	01/16/1996	Kelly et al.		
207.		5,485,849	01/23/1996	Panescu et al.		
208.		5,487,391	01/30/1996	Panescu		·
209.		5,487,729	01/30/1996	Avellanet et al.		
210.		5,487,757	01/30/1996	Truckai et al.		
211.		5,490,196	02/06/1996	Rudich et al.		
212.		5,494,034	02/27/1996	Schlondorff et al.		
213.		5,503,416	04/1996	Aoki et al.		
214.		5,513,637	05/07/1996	Twiss et al.		·
215.		5,515,160	05/07/1996	Schulz et al.		
216.		5,517,990	05/21/1996	Kalfas et al.		
217.		5,531,227	07/02/1996	Schneider		
218.		5,531,520	07/02/1996	Grimson et al.		
219.		5,542,938	08/06/1996	Avellanet et al.		
220.		5,543,951	08/06/1996	Moehrmann		
221.	V	5,546,940	08/20/1996	Panescu et al.		

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U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
222.	/JSS/	5,546,949	08/20/1996	Frazin et al.		
223.	1	5,546,951	08/20/1996	Ben-Haim		
224.		5,551,429	09/1996	Fitzpatrick et al.		
225.		5,558,091	09/24/1996	Acker et al.		
226.		5,568,809	10/29/1996	Ben-haim		
227.		5,572,999	. 11/12/1996	Funda et al.		
228.		5,573,533	11/12/1996	Strul		
229.		5,575,794	11/1996	Walus et al.	·	
230.		5,583,909	12/1996	Hanover		
231.		5,588,430	12/31/1996	Bova et al.		
232.		5,595,193	01/1997	Walus et al.		
233.		5,596,228	01/1997	Anderton et al.		
234.		5,600,330	02/04/1997	Blood		
235.		5,603,318	02/1997	Heilbrun et al.		
236.		5,617,462	04/1997	Spratt		
237.		5,617,857	04/08/1997	Chader et al.		,
238.		5,619,261	04/1997	Anderton	•	
239.		5,622,169	04/22/1997	Golden et al.		
240.		5,622,170	04/22/1997	Schulz		
241.	V	5,627,873	05/1997	Hanover et al.		

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U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
242.	/JSS/	5,628,315	05/13/1997	Vilsmeier et al.	•	
243.		5,630,431	05/20/1997	Taylor .		
244.		5,636,644	06/10/1997	Hart et al		
245.		5,638,819	06/17/1997	Manwaring et al.		
246.		5,640,170	06/17/1997	Anderson .		
247.		5,642,395	06/1997	Anderton et al.		
248.		5,643,268	07/01/1997	Vilsmeier et al.		
249.		5,645,065	07/08/1997	Shapiro et al.		
250.		5,647,361	07/15/1997	Damadian		
251.		5,662,111	09/02/1997	Cosman .		
252.		5,664,001	09/1997	Tachibana et al.		•
253.		5,674,296	10/07/1997	Bryan et al.		
254.		5,676,673	10/14/1997	Ferre et al.		·
255.		5,681,260	10/28/1997	Ueda et al		
256.		5,682,886	11/04/1997	Delp et al.		
257.		5,690,108	. 11/1997	Chakeres		
258.		5,694,945	12/09/1997	Ben-Haim		
259.		5,695,500	12/09/1997	Taylor et al.		
260.		5,695,501	12/09/1997	Carol et al.		
261.	V	5,697,377	12/1997	Wittkampf		

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U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
262.	/JSS/	5,702,406	12/30/1997	Vilsmeier et al.		·
263.	1	5,711,299	01/27/1998	Manwaring et al.		
264.		5,713,946	02/03/1998	Ben-Haim		
265.		5,715,822	02/10/1998	Watkins		
266.		5,715,836	02/10/1998	Kliegis et al.		
267.		5,718,241	02/17/1998	Ben-Haim et al.		
268.		5,727,552	03/17/1998	Ryan	:	
269.	<u> </u>	5,727,553	03/1998	Saad		
270.		5,729,129	03/17/1998	Acker		
271.		5,730,129	03/24/1998	Darrow et al.		•
272.		5,730,130	03/1998	Fitzpatrick et al.		·
273.		5,732,703	03/31/1998	Kalfas et al.		
274.		5,735,278	04/07/1998	Hoult et al.		
275.		5,738,096	04/14/1998	Ben-Haim		
276.		5,741,214	04/21/1998	Ouchi et al.		
277.		5,742,394	04/1998	Hansen		
278.		5,744,953	04/28/1998	Hansen		
279.		5,748,767	05/1998	Raab		
280.		5,749,362	05/12/1998	Funda et al.		
281.	V	5,749,835	05/12/1998	Glantz		

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Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
282.	/JSS/	5,752,513	05/19/1998	Acker et al.		
283.	1	5,755,725	05/26/1998	Druais		
284.		5,758,667	06/02/1998	Slettenmark		
285.		5,762,064	06/09/1998	Polyani		
286.		5,767,699	06/16/1998	Hansen et al.		
287.		5,769,789	06/23/1998	Wang et al.		
288.		5,769,861	06/23/1998	Vilsmeier		
289.		5,772,594	06/1998	Barrick		
290.		5,775,322	07/07/1998	Silverstein et al		
291.		5,776,064	07/07/1998	Kalfas et al.		
292.		5,782,765	07/21/1998	Jonkman		
293.		5,787,886	08/04/1998	Kelly et al.		
294.		5,792,055	08/11/1998	McKinnon		·
295.		5,795,294	08/18/1998	Luber et al.		
296.		5,797,849	08/1998	Vesely et al.		
297.		5,799,055	08/1998	Peshkin et al.		
298.		5,799,099	08/1998	Wang et al.		
299.		5,800,352	09/01/1998	Ferre et al.		
300.		5;800,535	09/01/1998	Howard, III		
301.	V	5,802,719	09/1998	O'Farrell, Jr., et al.		

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U.S. P	U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date	
302.	/JSS/	5,803,089	09/08/1998	Ferre et al.			
303.		5,807,252	9/15/1998	Hassfeld et al.			
304.		5,810,728	09/22/1998	Kuhn .			
305.		5,810,735	09/22/1998	Halperin et al	·		
306.		5,823,192	10/1998	Kalend et al.			
307.		5,823,958	10/20/1998	Truppe			
308.		5,828,725	10/27/1998	Levinson			
309.		5,829,444	11/03/1998	Ferre et al.	-		
310.		5,831,260	11/03/1998	Hansen	•		
311.		5,833,608	11/10/1998	Acker			
312.		5,834,759	11/10/1998	Glossop			
313.		5,836,954	.11/1998	Heilbrun et al.	·		
314.		5,840,024	11/24/1998	Taniguchi et al.			
315.		5,840,025	11/24/1998	Ben-Haim			
316.		5,843,076	12/1/1998	Webster, Jr. et al.			
<sup>3</sup> 17.		5,848,967	12/15/1998	Cosman		• 3	
318.		5,851,183	12/1998	Bucholz			
319.		5,865,846	02/02/1999	Bryan et al.			
320.		5,868,674	02/09/1999	Glowinski et al.			
321.	V.	5,868,675	02/09/1999	Henrion et al.	•		

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Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
322.	/JSS/	5,871,445	02/16/1999	Bucholz	Gubciass	1 lilling Date
323.	1	5,871,455	09/1999	Ueno		
324.		5,871,487	02/16/1999	Warner et al.		
325.		5,873,822	02/23/1999	Ferre et al.		
326.		5,884,410	03/1999	Prinz		
327.		5,891,034	04/1999	Bucholz		• •
328.		5,891,157	04/06/1999	Day et al.	:	
329.	,	5,904,691	05/18/1999	Barnett et al.		
330.		5,907,395	05/1999	Schultz et al.		
331.		5,920,395	07/06/1999	Schulz		
332.		5,921,992	07/13/1999	Costales et al.		
333.		5,923,727	07/1999	Navab ·		
334.		5,928,248	7/27/1999	Acker .		
335.	·	5,938,603	8/17/1999	Ponzi		
336.		5,938,694	08/17/1999	Jaraczewski et al.		
337.		5,947,981	09/1999	Cosman		
338.		5,950,629	09/14/1999	Taylor et al.		
339.		5,954,647	09/21/1999	Bova et al.		
340.		5,954,796	10/12/1999	Imran .		
341.	W	5,967,980	10/19/1999	Ferre et al.		

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U.S. PATENT DOCUMENTS							
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date	
342.	/JSS/	5,968,047	10/10/1999	Reed			
343.		5,971,997	10/1999	Guthrie et al.			
344.		5,976,156	11/02/1999	Taylor et al.			
345.	•	5,980,535	11/1999	Barnett et al.			
346.		5,987,349	11/16/1999	Schulz			
347.		5,987,960	11/1999	Messner et al.			
348.		5,999,837	12/1999	Messner et al.			
349.		5,999,840	12/1999	Grimson et al.			
350.		6,001,130	12/14/1999	Bryan et al.			
351.		6,006,126	12/1999	Coșman			
352.		6,016,439	01/2000	Acker			
353.		6,019,725	02/01/2000	Vesely et al.			
354.		6,024,695	02/15/2000	Greenberg et al.			
355.		6,050,724	04/2000	Schmitz et al.			
356.		6,059,718	05/2000	Taniguchi et al.			
357.		6,063,022	5/16/2000	Ben-Haim			
358.		6,073,043	06/2000	Schneider			
359.		6,104,944	08/15/2000	Martinelli			
360.		6,122,538	09/19/2000	Sliwa, Jr. et al.			
361.	V	6,131,396	10/17/2000	Duerr et al.			

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U.S. P	U.S. PATENT DOCUMENTS					
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
362.	/JSS/	6,139,183	10/2000	Graumann		
363.	1	6,149,592	11/2000	Yanof et al.		
364.		6,156,067	12/05/2000	Bryan et al.		
365.		6,161,032	.12/12/2000	Acker		•
366.		6,167,296	12/2000	Shahidi		
367.	·	6,172,499	01/09/2001	Ashe		
368.	·.	6,175,756	1/16/2001	Ferre et al.		
369.		6,223,067	04/24/2001	Vilsmeier		
370.		6,233,476	3/2001	Strommer et al.		
371.		6,246,231	06/12/2001	Ashe		
372.		6,273,896	08/14/2001	Franck et al.		
373.		6,298,262	10/02/2001	Franck et al.		
374.		6,332,089	12/2001	Acker et al.		
375.		6,341,231	1/22/2002	Ferre et al.		
376.		6,351,659	02/26/2002	Vilsmeier		
377.		6,424,856	07/23/2002	Vilsmeier et al.		
378.		6,428,547	08/06/2002	Vilsmeier et al.	·	•
379.		6,434,415	08/13/2002	Foley et al.		
380.		6,437,567	08/20/2002	Schenck et al.		
381.	V	6,445,943	9/3/2002	Ferre et al.		

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Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007	

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U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name .	Class/ Subclass	(If appropriate) Filing Date
382.	/JSS/	6,474,341	11/05/2002	Hunter et al.		
383.	1	6,493,573	12/10/2002	Martinelli et al.		
384.		6,498,944	. 12/24/2002	Ben-Haim et al		
385.		6,499,488	12/31/2002	Hunter et al.		٠.
386.		6,527,443	03/04/2003	Vilsmeier et al.	·	٠.
387.		6,551,325	04/22/2003	Neubauer et al.		
388.		6,584,174	06/24/2003	Schubert et al.	••	
389.		6,609,022	08/19/2003	Vilsmeier et al.		
390.		6,611,700	08/26/2003	Vilsmeier et al.		
391.		6,640,128	10/28/2003	Vilsmeier et al.		
392.		6,694,162	02/17/2004	Hartlep		
393.	V	6,701,179	03/02/2004	Martinelli et al.		

FOREIGN PATENT DOCUMENTS								
Ref. Desig.	Examiner's Initials	Document Number	Date	Country		Class/ Subclass	Translation Yes	ı . No
1.	/JSS/	WO 01/30437 A1 -	05/03/2001	WIPO				
2.	1	WO 99/60939	12/1999	WIPO				
3.		WO 98/38908	09/11/1998	PCT				
4.		WO 94/24933	11/10/1994	PCT	Υ.			
5.	V	WO 94/23647	10/27/1994	PCT				

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FOREIGN PATENT DOCUMENTS							
Ref. Desig.	Examiner Initials	Number	Date	Country	Class/ Subclass	Translation Yes	No
6.	/JS	WO 96/11624	04/25/1996	PCT			
7.		WO 88/09151	12/01/1988	PCT		Abstrac t	
8.		WO 98/08554	03/1998	WIPO	·		
9.		WO 91/07726	05/30/1991	PCT			
10.		WO 92/06645	04/30/1992	PCT .			
11.		WO 89/05123	06/1989	PCT			
· 12.		WO 94/04938	03/03/1994	PCT			
13.		WO 91/04711	04/18/1991	PCT		Abstrac t	
14.		WO 91/03982	04/1991	WIPO			
15.		WO 92/03090	03/05/1992	PCT			
16.		EP 0 319 844 A1	01/1988	EPO			
17.		EP 0 581 704 B1	07/27/1993	EPO .	·	U.S. Equiv	
18.		EP 0 651 968 A1	08/1990	EPO			
19.		EP 0350996 A1	01/1990	EPO			•
· 20.		EP 0419729 A1	.09/29/1989	EPO		U.S. Equiv	
21.		EP 0655138 B1	08/16/1993	EPO			
22.		EP 0894473 A2	01/24/1995	EPO			
23.		964149	03/1975	Canada		·	
24.	· W	2417970	02/20/1979	France		U.S. Equiv	

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# PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

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FOREIGN PATENT DOCUMENTS								
Ref. Desig.		aminer's ials	Document Number	Date	Country	Class/ Subclass	Translation Yes	on No
25.	/	JSS/	JP 2765738		Japan .			X
26.		<u> </u> .	DE 3042343 A1	06/1982 .	Germany	·		X
27.			DE 3831278 A1	03/1989	Germany		U.S. Equiv	
28.	·		DE 4233978 C1	04/1994	Germany	·	U.S. Equiv	
29.		V	DE 10085137		Germany			X

OTHE	OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)				
Ref. Examiner's Desig. Initials					
1.	/JSS/ "Prestige Cervical Disc System Surgical Technique", 12 pgs.				
2.		Adams et al., "Orientation Aid for Head and Neck Surgeons," Innov. Tech. Biol. Med., Vol. 13, No. 4, 1992, pp. 409-424.			
3.		Barrick et al., "Prophylactic Intramedullary Fixation of the Tibia for Stress Fracture in a Professional Athlete," Journal of Orthopaedic Trauma, Vol. 6, No. 2, pp. 241-244 (1992).			
4.		Barrick et al., "Technical Difficulties with the Brooker-Wills Nail in Acute Fractures of the Femur," Journal of Orthopaedic Trauma, Vol. 6, No. 2, pp. 144-150 (1990).			
5.		Barrick, "Distal Locking Screw Insertion Using a Cannulated Drill Bit: Technical Note," Journal of Orthopaedic Trauma, Vol. 7, No. 3, 1993, pp. 248-251.			
6.		Batnitzky et al., "Three-Dimensinal Computer Reconstructions of Brain Lesions from Surface Contours Provided by Computed Tomography: A Prospectus," Neurosurgery, Vol. 11, No. 1, Part 1, 1982, pp. 73-84.			
. <b>7.</b>		Benzel et al., "Magnetic Source Imaging: a Review of the Magnes System of Biomagnetic Technologies Incorporated," Neurosurgery, Vol. 33, No. 2 (Aug. 1993), pp. 252-259.			
8.	V	Bouazza-Marouf et al.; "Robotic-Assisted Internal Fixation of Femoral Fractures", IMECHE., pp. 51-58 (1995)			

Examiner:	/Jeffrey Smith/	Date Considered: 07/09/200	)7

## PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

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OTHE	R DOCUME	NTS (including Author, Title, Date, Pertinent Pages, etc.)
Ref. Desig.	Examiner's Initials	
9.	/JSS/	Brack et al., "Accurate X-ray Based Navigation in Computer-Assisted Orthopedic Surgery," CAR '98, pp. 716-722.
10.		Bryan, "Bryan Cervical Disc System Single Level Surgical Technique", Spinal Dynamics, 2002, pp. 1-33.
11.		Bucholz et al., "Variables affecting the accuracy of stereotactic localizationusing computerized tomography," Journal of Neurosurgery, Vol. 79, November 1993, pp. 667-673.
12.		Champleboux, "Utilisation de Fonctions Splines pour la Mise au Point D'un Capteur Tridimensionnel sans Contact," Quelques Applications Medicales, July 1991.
13.		Cinquin et al., "Computer Assisted Medical Interventions," IEEE Engineering in Medicine and Biology, May/June 1995, pp. 254-263.
14.		Cinquin et al., "Computer Assisted Medical Interventions," International Advanced Robotics Programme, September 1989, pp. 63-65.
15.		Clarysse et al., "A Computer-Assisted System for 3-D Frameless Localization in Stereotaxic MRI," IEEE Transactions on Medical Imaging, Vol. 10, No. 4, December 1991, pp. 523-529.
16.		Feldmar et al., "3D-2D Projective Registration of Free-Form Curves and Surfaces," Rapport de recherche (Inria Sophia Antipolis), 1994, pages 1-44.
17.		Foley et al., "Fundamentals of Interactive Computer Graphics," The Systems Programming Series, Chapter 7, July 1984, pp. 245-266.
18.		Foley et al., "Image-guided Intraoperative Spinal Localization," Intraoperative Neuroprotection, Chapter 19, 1996, pp. 325-340.
19,		Foley, "The StealthStation: Three-Dimensional Image-Interactive Guidance for the Spine Surgeon," Spinal Frontiers, April 1996, pp. 7-9
20.		
21.		
22.	V.	Gottesfeld Brown et al., "Registration of Planar Film Radiographs with Computer Tomography," Proceedings of MMBIA, June '96, pp. 42-51.

kaminer: /Jeffrey Smith/	Date Considered:	07/09/2007	_
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# PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 24 of 27

SERIAL NO.		
10/644,680		
GROUP		
3736		

Ref. Desig.	Examiner's Initials			
23.	· /JSS/	pages.		
24.		Hamadeh et al, "Kinematic Study of Lumbar Spine Using Functional Radiographies and 3D/2D Registration," TIMC UMR 5525 - IMAG		
25.		Hamadeh et al., "Automated 3-Dimensional Computed Tomographic and Fluorscopic Image Registration," Computer Aided Surgery (1998), 3:11-19.		
26.		Hatch, "Reference-Display System for the Integration of CT Scanning and the Operating Microscope," Thesis, Thayer School of Engineering, October 1984, pp. 1-189.		
27.	Liether was about 11 Death about 11 Death 12 Dea			
28.		Henderson et al., "An Accurate and Ergonomic Method of Registration for Image-guided Neurosurgery," Computerized Medical Imaging and Graphics, Vol. 18, No. 4, July-August 1994, pp. 273-277.		
29.		Hoerenz, "The Operating Microscope I. Optical Principles, Illumination Systems, and Support Systems," Journal of Microsurgery, Vol. 1, 1980, pages 364-369.		
30.		Hofstetter et al., "Fluoroscopy Based Surgical Navigation - Concept and Clinical Applications," Computer Assisted Radiology and Surgery, 1997, pages 956-960.		
31.		Horner et al., "A Comparison of CT-Stereotaxic Brain Biopsy Techniques," Investigative Radiology, SepOct. 1984, pp. 367-373.		
32.		Hounsfield, "Computerized transverse axial scanning (tomography): Part 1. Description of system," British Journal of Radiology, Vol. 46, No. 552, December 1973, pp. 1016-1022.		
33.		Jacques et al., "A Computerized Microstereotactic Method to Approach, 3-Dimensionally Reconstruct, Remove and Adjuvantly Treat Small CNS Lesions," Applied Neurophysiolog Vol. 43, 1980, pp. 176-182.		
34.		Jacques et al., "Computerized three-dimensional stereotaxic removal of small central nervous system lesion in patients," J. Neurosurg., Vol. 53, December 1980, pp. 816-820.		
35.	Joskowicz et al., "Computer-Aided Image-Guided Bone Fracture Surgery: Concept and Implementation," CAR '98, pp. 710-715.			
36.	$  \Psi  $	Kelly et al., "Computer-assisted stereotaxic laser resection of intra-axial brain neoplasms," Journal of Neurosurgery, Vol. 64, March 1986, pp. 427-439.		

Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007

# PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 25 of 27

SERIAL NO.		
10/644,680		
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FILING DATE : GROUP		
3736		
	10/644,680 GROUP	

OTHE	R DOCUME	ENTS (Including Author, Title, Date, Pertinent Pages, etc.)
Ref. Desig.	Examiner's Initials	
37.	/JSS/	Kelly et al., "Precision Resection of Intra-Axial CNS Lesions by CT-Based Stereotactic Craniotomy and Computer Monitored CO2 Laser," Acta Neurochirurgica, Vol. 68, 1983, pp. 1-9.
38.		Laitinen et al., "An Adapter for Computed Tomography-Guided, Stereotaxis," Surg. Neurol., 1985, pp. 559-566.
39.		Laitinen, "Noninvasive multipurpose stereoadapter," Neurological Research, June 1987, pp. 137-141.
40.		Lavallee et al, "Matching 3-D Smooth Surfaces with their 2-D Projections using 3-D Distance Maps," SPIE, Vol. 1570, Geometric Methods in Computer Vision, 1991, pp. 322-336.
41.	Lavallee et al., "Computer Assisted Driving of a Needle into the Brain," Proceedings International Symposium CAR '89, Computer Assisted Radiology, 1989, pp. 416-420	
42.		Lavallee et al., "Computer Assisted Interventionist Imaging: The Instance of Stereotactic Brain Surgery," North-Holland MEDINFO 89, Part 1, 1989, pp. 613-617.
43.		Lavallee et al., "Computer Assisted Spine Surgery: A Technique For Accurate Transpedicular Screw Fixation Using CT Data and a 3-D Optical Localizer," TIMC, Faculte de Medecine de Grenoble.
44.		Lavallee et al., "Image guided operating robot: a clinical application in stereotactic neurosurgery," Proceedings of the 1992 IEEE Internation Conference on Robotics and Automation, May 1992, pp. 618-624.
45.		Lavallee et al., "Matching of Medical Images for Computed and Robot Assisted Surgery," IEEE EMBS, Orlando, 1991.
46.		Lavallee, "A New System for Computer Assisted Neurosurgery," IEEE Engineering in Medicine & Biology Society 11th Annual International Conference, 1989, pp. 0926-0927.
47.		Lavallee, "VI Adaption de la Methodologie a Quelques Applications Cliniques," Chapitre VI, pp. 133-148.
48.		Leksell et al., "Stereotaxis and Tomography - A Technical Note," ACTA Neurochirurgica, Vol. 52, 1980, pp.1-7.
: 49.	V	Lemieux et al., "A Patient-to-Computed-Tomography Image Registration Method Based on Digitally Reconstructed Radiographs," Med. Phys. 21 (11), November 1994, pp. 1749-1760.

Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007

## PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 26 of 27

SERIAL NO.
10/644,680
•
GROUP
3736

Ref.	Examiner's	
Desig.	Initials	
50.	/JSS/	Levin et al., "The Brain: Integrated Three-dimensional Display of MR and PET Images," Radiology, Vol. 172, No. 3, September 1989, pp. 783-789.
51.		Mazier et al., "Computer-Assisted Interventionist Imaging: Application to the Vertebral Column Surgery," Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vol. 12, No. 1, 1990, pp. 0430-0431.
52.		Mazier et al., Chirurgie de la Colonne Vertebrale Assistee par Ordinateur: Appication au Vissage Pediculaire, Innov. Tech. Biol. Med., Vol. 11, No. 5, 1990, pp. 559-566.
53.		Pelizzari et al., "Accurate Three-Dimensional Registration of CT, PET, and/or MR Images of the Brain," Journal of Computer Assisted Tornography, January/February 1989, pp. 20-26.
54. ·		Pelizzari et al., "Interactive 3D Patient-Image Registration," Information Processing in Medical Imaging, 12th International Conference, IPMI '91, July 7-12, 136-141 (A.C.F. Colchester et al. eds. 1991).
55.		Pelizzari et al., No. 528 - "Three Dimensional Correlation of PET, CT and MRI Images," The Journal of Nuclear Medicine, Vol. 28, No. 4, April 1987, p.682.
56.	·	Phillips et al., "Image Guided Orthopaedic Surgery Design and Analysis," Trans Inst. MC, Vol. 17, No. 5, 1995, pp. 251-264.
57.		Potamianos et al., "Intra-Operative Imaging Guidance for Keyhole Surgery Methodology and Calibration," First International Symposium on Medical Robotics and Computer Assisted Surgery, September 22-24, 1994, pp. 98-104.
58.		Reinhardt et al., "CT-Guided 'Real Time' Stereotaxy," ACTA Neurochirurgica, 1989.
59.		Roberts et al., "A frameless stereotaxic integration of computerized tomographic imaging and the operating microscope," J. Neurosurg., Vol. 65, October 1986, pp. 545-549.
60.		Rosenbaum et al., "Computerized Tomography Guided Stereotaxis: A New Approach," Applied Neurophysiology, Vol. 43, No. 3-5, 1980, pp. 172-173.
61.		Sautot, "Vissage Pediculaire Assiste Par Ordinateur," September 20, 1994.
62.		Selvik et al., "A Roentgen Stereophotogrammetric System," Acta Radiologica Diagnosis, 1983, pp. 343-352.
<b>63.</b>	$\Psi$	Shelden et al., "Development of a computerized microsteroetaxic method for localization and removal of minute CNS lesions under direct 3-D vision," J. Neurosurg., Vol. 52, 1980, pp. 21-27.

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Examir	ier:	/Jeffrey Smith/			Date Considered	J:	07/09/2007	1
		THEILER STITLE	<u> </u>	•				

## PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 27 of 27

ATTORNEY DOCKET No.	SERIAL NO.	
5074A-000064	10/644,680	
APPLICANT		_
Frank et al.		•
FILING DATE .	GROUP .	_
August 20, 2003	3736	

OTHE	R DOCUME	NTS (including Author, Title, Date, Pertinent Pages, etc.)
Ref. Desig.	Examiner's Initials	
64.	/JSS/	Smith et al., "Computer Methods for Improved Diagnostic Image Display Applied to Stereotactic Neurosurgery," Automedical, Vol. 14, 1992, pp. 371-382 (4 unnumbered pages).
65.		Smith et al., "The Neurostation™A Highly Accurate, Minimally Invasive Solution to Frameless Stereotactic Neurosurgery," Computerized Medical Imaging and Graphics, Vol. 18, July - August 1994, pp. 247-256.
66.		The Laitinen Stereotactic System, E2-E6.
67.	·	Viant et al., "A Computer Assisted Orthopaedic System for Distal Locking of Intramedullary Nails," Proc. of MediMEC '95, Bristol, 1995, pp. 86-91.
68.		Watanabe et al., "Three-Dimensional Digitizer (Neuronavigator): New Equipment for Computed Tomography-Guided Stereotaxic Surgery," Surgical Neurology, Vol. 27, No. 6, June 1987, pp. 543-547.
69.		Watanabe, "Neuronavigator," Igaku-no-Ayumi, Vol. 137, No. 6, May 10, 1986, pp. 1-4.
70.		Weese et al., "An Approach to 2D/3D Registration of a Vertebra in 2D X-ray Fluoroscopies with 3D CT Images," pp. 119-128.
71.		Germano, "Instrumentation, Technique and Technology", Neurosurgery, Vol. 37, No. 2, August, 1995, pgs. 348-350
72.		Merloz, et al., "Computer Assisted Spine Surgery", Clinical Assisted Spine Surgery, No. 337, pgs. 86-96
73.	V	Hatch, et al., "Reference-Display System for the Integration of CT Scanning and the Operating Microscope", Proceedings of the Eleventh Annual Northeast Bioengineering Conference, March 14-15, 1985, pgs. 252-254

				_
Examiner:	/Jeffrey Smith/	Date Considered:	07/00/2007	

FORM HDP-1449 (Based on Form PTO-1449)

PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)

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ATTORNEY DOCKET No.	SERIAL NO.
5074A-000064	10/644,680
APPLICANT	
Frank, et al.	•
FILING DATE	GROUP
August 20, 2003	To Be Assigned

U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.	/JSS/	5,592,939	01/1997	Martinelli		
2.		5,913,820	06/1999	Bladen, et al.		
3.		5,951,475	09/1999	Gueziec, et al.	W	
4.		5,983,126	11/1999	Wittkampf		
5.		6,118,845	09/2000	Simon, et al.		,
6.		6,285,902	09/2001	Kienzle III, et al.		
7.		6,381,485	04/2002	Hunter, et al.	1	
8.	<b>V</b>	6,470,207	10/2002	Simon, et al.		

OTHE	R DOCUME	NTS (including Author, Title, Date, Pertinent Pages, etc.)
Ref. Desig.	Examiner's Initials	
1.	/JSS	B. Schuele, et al., "Correction of Image Intensifier Distortion for Three-Dimensional Reconstruction," presented at SPIE Medical Imaging, San Diego, California, 1995
2.	/JSS/	G. Champleboux, et al., "Accurate Calibration of Cameras and Range Imaging Sensors: the NPBS Method," Proceedings of the IEEE International Conference on Robotics and Automation, Nice, France, May, 1992
3.	/JSS/	Graeme P. Penney, Phillip G. Batchelor, Derek L.G. ill, and David J. Hawkes, "Validation of a Two to Three-Dimensional Registration Algorithm for Aligning Pre-Operative CT Images and Intraoperative Fluoroscopy Images," Med. Phys. 28, June 2001, pages 1024-1032.
4.	/JSS/	Gueziec, et al., "Providing Visual Information to Validate 2-D to 3-D Registration," Medical Image Analysis 4 (2000) 357-374, Copyright 2000 Elsevier Science B.C.
5.	/JSS/	Hamadeh, et al, "Towards Automatic Registration Between CT and X-ray Images: Cooperation Between 3D/2D Registration and 2D Edge Detection," Medical Robotics and Compueter Assisted Surgery, November 4-7, 1995.

Examiner:	/Jeffrey Smith/	Date Considered:	07/09/2007	

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M HDP-1449 (Based on Form PTO-1449)

## PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 2 of 2

ATTORNEY DOCKET No.	SERIAL NO.
5074A-000064	10/644,680
APPLICANT	
Frank, et al.	
FILING DATE	GROUP
August 20, 2003	To Be Assigned

OTHE	OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)		
Ref. Desig.	Examiner's Initials		
6.	/JSS/	Penney, et al., "A Comparison of Similarity Measures for Use in 2D-3D Medical Image Registration," IEEE Transactions on Medical Imaging, Vol. 17, No. 4, August 1998, Copyright 1998 IEEE.	

Examiner:

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Date Considered:

07/09/2007